#2

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/924,035

DATE: 08/21/2001
TIME: 09:25:28

Input Set : N:\EBONY'S\ES.txt
Output Set: N:\CRF3\08162001\I924035.raw

ENTERED

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      4 <110> APPLICANT: Grlach, Jrn
      6 <120> TITLE OF INVENTION: Expressed Sequences of Arabidopsis
      7        thaliana
      9 <130> FILE REFERENCE: 2011US
W--> 11 <140> CURRENT APPLICATION NUMBER: US/09/924,035
        <141> CURRENT FILING DATE: 2001-08-07
C--> 11 <141> PRIOR APPLICATION NUMBER: US 60/148,784
     13 <150> PRIOR APPLICATION NUMBER: US 60/148,784
     14 <151> PRIOR FILING DATE: 1999-08-13
     16 <160> NUMBER OF SEQ ID NOS: 900
     18 <170> SOFTWARE: FastSEQ for Windows Version 3.0
     20 <210> SEQ ID NO: 1
     21 <211> LENGTH: 427
     22 <212> TYPE: DNA
     23 <213> ORGANISM: Arabidopsis thaliana
     25 <220> FEATURE:
     26 <221> NAME/KEY: misc_feature
     27 <222> LOCATION: (1)...(427)
     28 <223> OTHER INFORMATION: n = A,T,C or G
     30 <400> SEQUENCE: 1
     31  acggtatcga taagcttgat atcgaattcg cggccgcgcg gcatgattga aggatttata    60
     32  tggtcaccaa gaagcggtga caccaataac caacccgata gttggcctct tgaagatggt   120
     33  cctcattctg atttcacggg acctacctcg gggtgcacag cgtgtgtagc tcttattaaa   180
     34  gataagaagc tctttgttgc aaatgccggt gactcacgtt gtgtgatatc aagaaagagt   240
     35  caggcttaca atctttctaa agatcacaag cctgatcttg aagttgaaaa agaaaggata   300
W--> 36  ttgnangctg gtggctttat tcacgctggg agaatcaatg gaagcttgaa tctgacaaga   360
     37  gccattggtg atatggagtt caagcagaat aagttttttac catctgaaaa gcaaatggtt   420
     38  actgctg                                                             427
     40 <210> SEQ ID NO: 2
     41 <211> LENGTH: 206
     42 <212> TYPE: DNA
     43 <213> ORGANISM: Arabidopsis thaliana
     45 <400> SEQUENCE: 2
     46  agataatgaa catatttctg tccctgaagt ttttgctctc ttcagttgca agctcccta    60
     47  tttcggtttg gaaacgtctg aggagttcaa tagcgatatt tctgaactcg ttttctcgtc   120
     48  ctttcatgct cacaatcacc ttaaccttgt caccatcttg caagaacttt tgggcagccc   180
     49  ttagacgaac ggaataatca tgctga                                        206
     51 <210> SEQ ID NO: 3
     52 <211> LENGTH: 369
     53 <212> TYPE: DNA
     54 <213> ORGANISM: Arabidopsis thaliana
     56 <220> FEATURE:
     57 <221> NAME/KEY: misc_feature
     58 <222> LOCATION: (1)...(369)
     59 <223> OTHER INFORMATION: n = A,T,C or G
     61 <400> SEQUENCE: 3
     62  cggtatcgat aagcttgata tcgaattcgc ggccgcctcg gtgaccatat tcaaaacttt    60
     63  cccacgttaa ttctctcttc tttgttttgt ttcagattca ttactttttct ccaaaaaact   120
```

8/21/01

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                                                                            180
    64  ttcttcaaga tctgttcttt taaataatta tggcggaaga acatcgatgc gagacgcctg   240
    65  aaggtcaccg tctctgcgtt aacaactgcg gtttcttcgg aagctcagcg acaatgaatc   300
W-->66  tatgttcaaa ctgttacggc gatctctgtc tcnaacaaca acaacaagct tccatgaaat   360
    67  caaccgtcga atcatctctc tctccggtga tcgcacctgt tctcgaaaac tacgcggcgg   369
    68  agttagaga
    70  <210> SEQ ID NO: 4
    71  <211> LENGTH: 430
    72  <212> TYPE: DNA
    73  <213> ORGANISM: Arabidopsis thaliana
                                                                             60
    75  <400> SEQUENCE: 4
    76  ccatggcgtt agaactatgg caaactctca aagaagcaat ccatgcttac acaggtcttt    120
    77  ctcctgttgt cttcttcact gctctagctc tcgccttcgc catttaccaa gtcatctcag    180
    78  gctggtttgc ctcgccgttc gatgatgtta accgacatca gagagctaga tccttggctc    240
    79  aagaggagga gccaccgatt cctcagcctg ttcaagtcgg tgagatcacg gaggaggagc    300
    80  ttaaacagta cgatggctct gatcctcaaa agccccttct tatggctatc aaacatcaga    360
    81  tctatgatgt tacacaaagc aggatgttct acggaccagg aggaccatat gctttgtttg    420
    82  cagggaaaga cgctagccga gctcttgcaa agatgtcatt tgaggagaaa gacttgactt    430
    83  gggatgtctc
    85  <210> SEQ ID NO: 5
    86  <211> LENGTH: 106
    87  <212> TYPE: DNA
    88  <213> ORGANISM: Arabidopsis thaliana
                                                                             60
    90  <400> SEQUENCE: 5
    91  cggtatcgat aagcttgata tcgaattcgc ggccgcgcac taattaatca tgctacatac    106
    92  atagtcaaag ttcgtagtaa gtagacttag aaatagttac cgttag
    94  <210> SEQ ID NO: 6
    95  <211> LENGTH: 271
    96  <212> TYPE: DNA
    97  <213> ORGANISM: Arabidopsis thaliana
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    99  <400> SEQUENCE: 6
   100  agacttgacg ttgcaaatgc cgttaatcct ctcccaaagg aggaagacaa gaaacttgtt   120
   101  atagtgaaga cgcccaatgc agtaaatccg ctcgtatggg attattctcc acttctcacc   180
   102  attgatacct gggagcacgc ttactatctg gattttgaga accgaagagc tgaatacata   240
   103  aatacattca tggaaaagct tgtgtcatgg gaaactgtaa gcacaaggtt ggaatccgca   271
   104  attgctcgag cagtgcaaag agaacaagaa g
   106  <210> SEQ ID NO: 7
   107  <211> LENGTH: 322
   108  <212> TYPE: DNA
   109  <213> ORGANISM: Arabidopsis thaliana
   111  <220> FEATURE:
   112  <221> NAME/KEY: misc_feature
   113  <222> LOCATION: (1)...(322)
   114  <223> OTHER INFORMATION: n = A,T,C or G
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   116  <400> SEQUENCE: 7
   117  ttttttttaaa ccaaatagat aggatatatt tattcaaatc agaagcacat tagggaacac  120
   118  aagaacagag acaattcaac acatgtaaat gcataaaatc aaacaaactg aaacacaaag  180
W-->119  acacttcaaa cgaaagaact gagattgaag gaaccaatca tgtttgngng agcagaactc  240
W-->120  atatctagct caagctgaag cttctgnngc tcaagctgtt gcctcaaaac tggatcttcc  300
   121  acttgctctg ttattgcagc tacttgttcc gtctgctcag tctccaaacc ctgaacagga
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Input Set : **N:\EBONY'S\ES.txt**
Output Set: **N:\CRF3\08162001\I924035.raw**

322

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122  acagattcag cagtcggtgt ct
124 <210> SEQ ID NO: 8
125 <211> LENGTH: 497
126 <212> TYPE: DNA
127 <213> ORGANISM: Arabidopsis thaliana
129 <400> SEQUENCE: 8
130  ttttttttt tttttttaat cataaaaatg aaagcctctt ccataggcag aaacttacac    60
131  aaacatttga gaattcacta cttagacatt gtctcttgtt actaccgagt taaaaagatt   120
132  tacattactc tcctcactcc atcaacttct ttgaattgtt ccatctctaa ccaccatacg   180
133  gtaagccgag cctaagggaa gtgtcggagc tctcggagtc aacaggcgct ccggtagagt   240
134  ttccggcgtt agtaatagac tccgacgact gtccttcctc gtacacagca gcgttctccg   300
135  attcagcacc accgtgtgca tgcacattgt tacatatttg catgccaagt cgctcgttct   360
136  cttccgttag ttgcgttccc tgcaaaaatc aagacaaaac atatcattaa gttctctagc   420
137  taagtatttg cattttgtgt ttttagtggc accatgtgtt ttgaatttct ctagagatca   480
138  actaactacg aatgagc                                                   497
140 <210> SEQ ID NO: 9
141 <211> LENGTH: 347
142 <212> TYPE: DNA
143 <213> ORGANISM: Arabidopsis thaliana
145 <400> SEQUENCE: 9
146  ttcatttacg taaacacgac agagtcaata cttgtgacga tgagcatcaa tatttactac    60
147  tggcaaagta acttaaacaa aaacaaaaac acgggtaagg gtctaaggga aactacttaa   120
148  accagtaaga aaaccgatca ctatcttcat ttcatttgaa tcaacataag atctcaagat   180
149  gcgtttgtat ttgcccgggt taccagacca ggtagacttg ttgatgatcg cttaatcttt   240
150  agccagtact cgttatacac ttttttcctc gacatcttct cgaagaatct actccaacct   300
151  tccataactc gggtcagcct aacactcttg ggtcttccta taaggta                347
153 <210> SEQ ID NO: 10
154 <211> LENGTH: 216
155 <212> TYPE: DNA
156 <213> ORGANISM: Arabidopsis thaliana
158 <400> SEQUENCE: 10
159  ttttttttt tttttccaga aaaaaggaca agccaataaa acatagattg tctacacaca    60
160  cacttctctt aaaaatacaa actttgagga aacgagagaa actttgaaag ccatacatac   120
161  aatacaagag tgttttgatg gagggaggtc ttaaaagtcg agattggagg aaggattcgg   180
162  gtatccttta tactcaaatt gtttcttgga aaagcc                            216
164 <210> SEQ ID NO: 11
165 <211> LENGTH: 329
166 <212> TYPE: DNA
167 <213> ORGANISM: Arabidopsis thaliana
169 <400> SEQUENCE: 11
170  ttttttttt ttttttttttt tttttttttg gaggagaaga gctgaatttt tctaattaat    60
171  aaataaaatt tggagcccat aatttacatt gctatatctc tctatagctc ctggcttcga   120
172  agtaatttta tcatcgtcca cacaaaaaaa acctatttcg agtatacaaa ctactaatta   180
173  aatcggaacc actgtgccca cttttctttt ctatcagaga aactaaatca gccagtgctt   240
174  cgctttgcaa attacatcct gcagtgtagc agacaaggcc aagattctga accgatattg   300
175  aagagagagt caacaacatc atacaagtg                                    329
177 <210> SEQ ID NO: 12
178 <211> LENGTH: 145
179 <212> TYPE: DNA
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Input Set : N:\EBONY'S\ES.txt
Output Set: N:\CRF3\08162001\I924035.raw

180 <213> ORGANISM: Arabidopsis thaliana
182 <400> SEQUENCE: 12
183 tttttttaaa caaacagtct acacatagac aactcaaagc caacaaatga aacaaaatat   60
184 aaaacatatg caaagataaa atatttaaaa aaaggtaaca cgttgattat acatgagtat   120
185 acgtatatct atatatatac gtatt   145
187 <210> SEQ ID NO: 13
188 <211> LENGTH: 318
189 <212> TYPE: DNA
190 <213> ORGANISM: Arabidopsis thaliana
192 <400> SEQUENCE: 13
193 tttttttttta ttaatgattt ttatttttac atgcaaatta tacgactgaa atgttatagg   60
194 aatagagaca tgtttgtatc acaaaattaa cttatgtagg aaaaacaaat agtataagtc   120
195 tatcgttccc ctctctgttc aggcgtcaag cctcccttgc cacatttagg acaactcttc   180
196 ataccaaatc cttgacaatc aaaacatttc cacctctcaa acatatttcc gttcttctta   240
197 tttttacctg ttcccttgca accgggacat tcaattgctc ctttggctcc acaagtctca   300
198 caacttttga atatcgaa   318
200 <210> SEQ ID NO: 14
201 <211> LENGTH: 278
202 <212> TYPE: DNA
203 <213> ORGANISM: Arabidopsis thaliana
205 <400> SEQUENCE: 14
206 ataacaaaac tgtatatcaa tataagattt ttttttaatg ttttgactgg caacacgagc   60
207 caggctcaaa atcaatggga ccaaaaaaat atcaaagaaa cagcggattt tgacagtgtt   120
208 gtttagcact tttgcatcac ccaaagttct tatttcaaag ttttctcctt tttctcttat   180
209 cagtctgaga agtcatttaa aaaggaagag ttttttaattg atgggttcct ttccgatggc   240
210 tttctggaca agcccggctt gctctttgac atggaaag   278
212 <210> SEQ ID NO: 15
213 <211> LENGTH: 276
214 <212> TYPE: DNA
215 <213> ORGANISM: Arabidopsis thaliana
217 <400> SEQUENCE: 15
218 tttttttta gttaaaattt tattgattgc gctagtcatt ttatgtttaa attcctaaaa   60
219 cctaagataa gccataaaaa aacatctcga aatatgacat caaaaatata acatttaatt   120
220 ccaaatatca gttctacaat atgggcaata aacattggtg tctagccaag gcaataagca   180
221 tatggagtga aacttatggg cacatggtag gtgtaccaag gtctcaccct tcttgaaccg   240
222 gtctagacat atagcacaat cttgttgttc cctaac   276
224 <210> SEQ ID NO: 16
225 <211> LENGTH: 566
226 <212> TYPE: DNA
227 <213> ORGANISM: Arabidopsis thaliana
229 <220> FEATURE:
230 <221> NAME/KEY: misc_feature
231 <222> LOCATION: (1)...(566)
232 <223> OTHER INFORMATION: n = A,T,C or G
234 <400> SEQUENCE: 16
235 cttttttttt tttttttga ttagattatc cgaattttat tctccataca gacaatcaat   60
236 tattcgaatc ttgattttt tgttccaagt ataataaagg taacgtcaca tcagaaatct   120
237 atttatttcc caaacactaa ttgcacaaaa agcaaagtaa aaccactgtg atacaaattc   180
238 tataaagata aaaaaagttt atgctcaatt aaataacgta aagaaaacta tattgacaaa   240

Input Set : N:\EBONY'S\ES.txt
Output Set: N:\CRF3\08162001\I924035.raw

```
       239  taaagacaac aacgacggaa ataaacaact aaaaaccact ttctttgatt tcacacaatt    300
       240  ttagtgagtc aaaacgctgt gctgaagtag ctactcacca cattctcaca cagaatttgg    360
       241  agaaccttag cattacttgg cttcacacat cttggcatct taaactgtcc agccgatgaa    420
       242  ccaagcccga gaaaatgttc ttgaatcttc cggaaagttc cttttgcgac aactctcagc    480
W-->   243  tccaaggctc caatagtctt gcatttccgg nnnctaacgt aacccgcatc gatgaatgct    540
                                                                                 566
       244  cggtctaaac agttgcagca atcttg
       246  <210> SEQ ID NO: 17
       247  <211> LENGTH: 328
       248  <212> TYPE: DNA
       249  <213> ORGANISM: Arabidopsis thaliana
       251  <400> SEQUENCE: 17
       252  tttttttttt tttgtttcta ttttttgctt tcctaatcgt catctgaagt ttccggatcg     60
       253  ggtaatttgt ttaaatcaac ccgttcaacg atccattaca cctcttaaac ccttctttac    120
       254  tactacactc cataagatca tcattaatac gataatcact atgattatct acgtaatcat    180
       255  gattaccacg ttgatgttga tgatgatgat gatgacgatt ccctcccgcc ccgccgctt    240
       256  ctaacgcatc cacttgtgct ccaacctccg ccgctttct ccttatatac gccgccgaca    300
                                                                                 328
       257  tatctccacc accgttcact cctcctcc
       259  <210> SEQ ID NO: 18
       260  <211> LENGTH: 315
       261  <212> TYPE: DNA
       262  <213> ORGANISM: Arabidopsis thaliana
       264  <220> FEATURE:
       265  <221> NAME/KEY: misc_feature
       266  <222> LOCATION: (1)...(315)
       267  <223> OTHER INFORMATION: n = A,T,C or G
       269  <400> SEQUENCE: 18
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       271  tataccaacg tctccattta gctcgaaacg cagcgtctca tagaagttga ctaatgctgc    120
       272  ttttgcagca gaataaagac tcatccgtgg tagaggcaac cagtttcaa ccgatgcatt    180
       273  cacgactatt cggccattcg tctggtgaag gtatggcaac gctacgtatg tcggataaac    240
       274  attcccccag aagtttatgt ccagcaaatg tggaaacaca gtcgtgtcac tcacttcctc    300
                                                                                 315
       275  aaagtaaaaa gtgtg
       277  <210> SEQ ID NO: 19
       278  <211> LENGTH: 292
       279  <212> TYPE: DNA
       280  <213> ORGANISM: Arabidopsis thaliana
       282  <400> SEQUENCE: 19
       283  tttttttttt tttttttttt tttaaatggg tcaagacaac taaaacttga tgaatccaaa     60
       284  aagaaaaaga acaatggaaa ttttgggget aagtactctt tgtttttgtt ttctcagaac    120
       285  agatgaaaca atcttaaagg gttgtttcgt tcatcttcta gacttctttt ttgaggcctt    180
       286  agaggaaggc gcaggtgcat tccctttaga actggccact tggtttgact ttgaagttga    240
                                                                                 292
       287  aggagctgct tcttgtttat ccttggtcac cgcaccctgc gagccacgga tt
       289  <210> SEQ ID NO: 20
       290  <211> LENGTH: 137
       291  <212> TYPE: DNA
       292  <213> ORGANISM: Arabidopsis thaliana
       294  <400> SEQUENCE: 20
       295  tttttttttt tttttttttt tttttataca gagaaggggt tattgtttta caagtttaca     60
       296  acatctacaa agatttcact acatcctgaa accaaaccct tcgtcctaat ttcacaaacc    120
```

Use of n and/or Xaa has been detected in the Sequence Listing.
Review the Sequence Listing to insure a corresponding
explanation is presented in the <220> to <223> fields of
each sequence using n or Xaa.

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L:11 M:282 W: Numeric Field Identifier Missing, <140> CURRENT APPLICATION NUMBER: is Added.
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:36 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:66 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:119 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:120 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:270 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:394 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:411 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:462 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31
L:606 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41
L:633 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:634 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:745 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50
L:775 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52
L:776 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52
L:791 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:53
L:830 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55
L:871 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:58
L:872 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:58
L:966 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:65
L:1009 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:68
L:1034 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:70
L:1192 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82
L:1258 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88
L:1398 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:98
L:1434 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101
L:1452 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:102
L:1476 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103
L:1494 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:104
L:1560 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:108
L:1561 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:108
L:1620 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:112
L:1660 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:115
L:1677 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:116
L:1698 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:117
L:1714 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:118
L:1732 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:119
L:1739 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:119
L:1765 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:121
L:1767 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:121
L:1784 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:122
L:1785 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:122
L:1787 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:122
L:1844 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:127
L:1879 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:129
L:1925 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:132
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L:1994 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:137
L:2097 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:145
L:2112 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:146
L:2191 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:152
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